

## EDITORIAL

### CHANGING TIMES – CHANGING RIVERS

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In August 1997 the International Association of Geomorphology (IAG) held its fourth International Conference on Geomorphology (ICG) at Bologna, Italy. The conference is held every four years and since the inaugural meeting in Manchester in 1985 it has established itself as a benchmark event in the lives of academic and practising geomorphologists worldwide. The significance of the IAG conference can be illustrated by reference to just a few indicative statistics. The Bologna conference attracted 969 registered participants from 72 countries. They presented several hundred papers (20 per cent verbal presentations, 80 per cent posters) in 10 Thematic Sessions, eight Symposia and one Workshop. Additionally, there were post-conference excursions and both the IAG Council and its General Assembly held meetings that moved forward the business of the Association. Very large conferences tend to be excessively ceremonial, to be punctuated by too many self-congratulatory bun fights and self-effacing plenary lectures, and to be memorable mostly for the frustration caused by having parallel technical sessions with annoying clashes of interest. The Bologna ICG managed to avoid most of these pitfalls and where it didn't it wrapped them up in a culture and ambience that was so palatable and satisfying that nobody noticed them anyway.

There was, for many years, an unfilled niche for a high-profile multinational geomorphology conference and, in our opinion, the IAG should be congratulated for filling that niche successfully and, in the process, promoting the international dimension of geomorphology. Of course, a meeting on the scale of the ICG can never satisfy all the legitimate expectations of the geomorphological community and important roles remain for the conference series convened by the national associations, research groups and the professional societies with which geomorphologists are affiliated.

The papers presented in this Special Issue of *Earth Surface Processes and Landforms* are drawn from the session on Fluvial Geomorphology at Bologna. This was one of the larger sessions with over 69 posters and four presentations during a double-length time slot in the programme. Contributions were made by authors from 24 countries and covered a vast array of topics. Prominent themes included catchment and channel sediment dynamics, fluvial hydraulics, bank mechanics, morphological evolution and response of the fluvial system to environmental change and human impacts.

The general theme of sediment dynamics and transport processes received the most attention, with papers and posters presenting results from field investigations, laboratory flume studies and theoretical analyses. Several posters investigated coupled slope–channel systems and particular emphasis was placed on seasonal adjustments in alluvial fans. The still intriguing issue of the downstream fining of the bed material grain size was addressed, as well as interactions between sediment size and both channel and floodplain morphology. Linking fluvial processes and channel morphology was also a popular topic. New light was cast on the physical processes affecting bank and channel stability, and the effect of micro- and macro-bedforms on turbulent flow structures and channel morphology.

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Several posters investigated drainage basin and river pattern evolution on the basis of new conceptual models and analytical approaches. Emphasis was placed on relationships between morphogenetic processes and the plano-altimetric configuration of basins with different tectonic histories and geomorphological characteristics. A number of new geomorphological maps of alluvial plains, produced using approaches that ranged from traditional morphogenetic criteria to statistical analysis of electrical sounding data, were presented.

Treatment of natural environmental change and river dynamics focused on glacio-isostatic movements, the relationship between timberline fluctuations and basin stratigraphy and palaeohydraulics of selected river systems. Alluvial terraces were also examined in detail, including posters dealing with the influence of regression and transgression cycles, landmass uplift and glaciation on terrace development and sedimentology. Case studies from different parts of the world were used to illustrate the types and time-scales of channel changes that may be triggered by human interventions at the catchment and channel scales.

Contributors to the session were invited to submit papers based on their posters and presentations for consideration for publication in *Earth Surface Processes and Landforms*. By the closing date for submission, at the end of November 1997, 27 papers had been submitted. That is, of course, some time ago and some readers may wonder why there is a gap of nearly two years between submission of the papers and appearance of this Special Issue. Those readers will probably never have edited such a Special Issue and might be unaware of just how much times have changed in the conference proceedings business.

As editors, we would argue that two years is probably close to the minimum delay in producing a proceedings volume these days. This is perhaps an indirect result of the increasing pressure on academics to publish substantive papers in just a few journals that have high impact values and which, with some justification, are perceived to be *the* leading international journals in their disciplines. This pressure poses particular difficulties in the compilation of conference proceedings papers because it has devalued traditional Conference Proceedings and Symposia Series books to the point that many researchers no longer see them as worthwhile places to publish their best material. Consequently, the only way to attract high quality conference papers for publication is to put them in a Special Issue of an esteemed journal and, of course, subject them to the same high standard of refereeing as the normal run of that journal. The outcome has been virtually to eliminate the 'conference book' and to focus even more attention on those few *key* journals.

Our experience (not only in the case of this Special Issue, but also in editing several conference volumes over the last 20 years) is that it is increasingly difficult to find referees who have the capability and will find the time to do this job thoroughly. Not only are the people with the necessary skills and experience stretched by the need to perform and publish their own research, but also they are already busy refereeing more and more papers for those *key* journals. This is, of course, a perennial problem to all journal editors, but there is an important difference that compounds the problem in the case of a Special Issue. While a recalcitrant referee may delay the publication of a *single paper* in the normal run of a journal, the effect of delaying a single paper in a Special Issue is to delay the *entire volume*. Like a shipping convoy, the progress of a Special Issue is governed by the speed of the slowest paper. This makes progress painfully slow at times, but the alternative - to abandon consideration of a paper just because one or more of its reviews are not forthcoming - would simply be unfair to the unlucky author(s). If production of this Special Issue has been a little slower than we all would wish, it is because expediency has been sacrificed to ensure that every submitted paper received the same careful consideration and that selection of the papers for inclusion was based on a refereeing and editing process that was rigorous and comprehensive. Our depressing conclusion is that the situation will not improve until a way is found of re-establishing the conference book as an esteemed place to publish.

Clearly, these are changing times for the publication of conference proceedings papers and it is appropriate that the theme linking the papers in this Special Issue is that of *Changing Rivers*. Recent progress in the field of fluvial geomorphology has been rapid and the papers in this volume highlight some significant areas of advance. Their content epitomizes modern approaches to the study of river changes; these approaches combine traditional and innovative research methods to assimilate, analyse and interpret information from field, map, database, remotely sensed and historical sources.

The papers deal in innovative and original ways with the dynamic links that bind the fluvial system to its catchment, the channel to its floodplain, and the detailed morphology of the present river to its past. They

demonstrate that we now know a great deal about these links, and that we possess the technical capability to learn a great deal more. The papers also illustrate that to improve our understanding of fluvial geomorphology we must strive to link studies of fluvial processes to the morphology not only of the surrounding channel, but also that of floodplain, valley floor and catchment within which the channel is located. It is important that process studies recognize that local conditions are inexorably linked to the spatial dynamics of the fluvial system and that studies of local process–form interactions should no longer be undertaken without regard for the wider, catchment context.

In addition to recognizing these spatial links, knowledge and awareness of historical links must also be strengthened, even in studies ostensibly concerned with contemporary fluvial processes and sediment mechanics. The reason for this is simple: the findings reported in the papers published here reinforce the principle that antecedent conditions and the history of river evolution are important in conditioning current processes and morphological responses. With a very few exceptions, knowledge of catchment changes, major flow events and trends of channel evolution in the preceding months, years, decades, centuries and even millennia will assist the researcher enormously in understanding and explaining the present situation.

In closing, the guest editors would like to thank the Italian Geomorphology Research Group for its efforts in maintaining the high standard of the International Geomorphology Conference at Bologna, the authors for contributing their papers and being patient with the editors over the last two years, and the many anonymous referees whose commitment and diligence made this Special Issue possible.